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An Economic Analysis of the Protestant Reformation

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This paper seeks to explain the initial successes and failures of Protestantism on economic grounds. It argues that the medieval Roman Catholic Church, through doctrinal manipulation, the exclusion of rivals, and various forms of price discrimination, ultimately placed members seeking the *Z* good "spiritual services" on the margin of defection. These monopolistic practices encouraged entry by rival firms, some of which were aligned with civil governments. The paper hypothesizes that Protestant entry was facilitated in emergent entrepreneurial societies characterized by the decline of feudalism and relatively unstable distribution of wealth and repressed in more homogeneous, rent-seeking societies that were mostly dissipating rather than creating wealth. In these societies the Roman Church was more able to continue the practice of price discrimination. Informal tests of this proposition are conducted by considering primogeniture and urban growth as proxies for wealth stability.

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> Rome, your avidity deludes you, and you shear too much wool from your sheep. So great is your avarice that you pardon sins for money. [Rocquain, *La Cour de Rome* (1897, 2:45)]
>
> When land, like moveables, is considered as the means only of subsistence and enjoyment, the natural law of succession divides it, like them, among all the children of the family.... But when land was considered as the means, not of subsistence merely, but of power and protection, it was thought better that it should descend undivided to one. [Adam Smith, *Wealth of Nations* ([1776] 1937, vol. 1, bk. 3, chap. 2, pp. 361–62)]

I. Introduction

This paper takes an economic approach to explaining the Protestant Reformation. It treats the medieval Roman Catholic Church as a firm that provided religious and legal services and used its market power to extract rents from its "customers." It asserts that by the late Middle Ages the Catholic Church was pricing its "product" too high to dissuade market entry by rival Protestant churches, and it attempts to test this theory by comparing regions that remained Catholic to those that switched to Protestantism.

The extensive literature on the Protestant Reformation contains basically three competing hypotheses. The first, advanced by Protestant theologians, maintains that the Catholic Church gradually lost influence because it became ethically and morally corrupt. The second, advanced by historians, asserts that circumstances forced the Catholic Church to take sides in a series of conflicts between emergent northern European states and emergent cities. Its side often lost, leading to its gradual decline of influence and prestige. The third, advanced by economists, follows an argument originated by Adam Smith (1776) and formalized by Iannaccone (1991). It holds that state-supported religious monopolies behave inefficiently in many ways, thereby opening up the possibility of entry by more efficient competitors.[1]

Our previous contributions (Ekelund, Hébert, and Tollison 1992; Ekelund et al. 1996) to this "economic" approach emphasized rent extraction through the selling of spiritual services at very high prices. A major finding of our earlier work was that control by religious authorities of portions of the legal system provides market power that can be used to exclude rivals. By explicitly recognizing rent extraction in the

[1] The modern economics of religion is developed in Azzi and Ehrenberg (1975) and Iannaccone (1992, 1998).

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church's administration of justice and in exercising its gatekeeper function (control of the keys to heaven), we have been able to refine Smith's general argument regarding inefficiency and supplement Iannaccone's (1991) argument that religious monopolies do a poor job of providing religious services, including weak support for many of the functions that are taken on by modern governments.[2] This paper advances an additional argument that if the religious monopoly overcharges, it risks two forms of entry: (*a*) the common citizenry may choose other dispensers of religious services, and (*b*) the civil authorities may seek a different provider of legal services. The Protestant Reformation may be seen, in part, as a manifestation of this second form of entry.

Our theory explores supply-side as well as demand-side factors affecting the timing and acceptance of the Protestant Reformation.[3] We argue that the medieval church extracted rents by practicing sophisticated forms of price discrimination so that it gave new encouragement to market entry by a rival "firm" offering a modified "product." Moreover, we seek to test this hypothesis. Our test rests on the premise that the medieval church was most likely to maintain its incumbent monopoly position in less heterogeneous, semifeudal, rent-seeking societies that were mostly dissipating rather than creating wealth; whereas Protestant entry was most likely to occur in emerging market order societies that were creating wealth through expansion of profit opportunities.[4] The

[2] Iannaccone (1991) correctly presents churches as providing a large variety of services, both private and public. In the past we have used "membership" or "recipients of eternal salvation" as a variable (Ekelund, Hébert, and Tollison 1989) but prior to now have failed to note that membership is but a proxy for a whole range of goods or, in Becker's terms, a *Z* good, not an end in itself. The *Z* good is a complex combination of spiritual goods and other benefits that are obtained from church membership. As examples show later in this paper, the poor received services "free of costs" or at the level of the supplier's marginal cost. We also note that Smith's ([1776] 1937, pp. 740–66) original account of the market for religion suggests a full-price interpretation of religious services—one that does not differentiate (in a modern context) between nominal fees and various forms of deterioration of quality.

[3] We recognize that the Protestant Reformation was neither a singular nor a homogeneous event. In discussing the Reformation, therefore, we accept Max Weber's stylized version. According to Weber ([1904–5] 1930, pp. 104–5), "the complete elimination of salvation through Church and the sacraments (which was in Lutheranism by no means developed to its final conclusions), was what formed the absolutely decisive difference from Catholicism."

[4] Superficially, our hypothesis appears similar to Weber's sociohistorical view, which maintains that Protestantism emerged in areas of highest economic development, i.e., those most favorable to a "revolution in the Church." Weber also argued that Calvinism, at least initially and in the form developed by John Calvin in Geneva, created "the most absolutely unbearable form of ecclesiastical control of the individual which could possibly exist" (1930, p. 37). Our argument, in contrast, asserts that individuals, seeking higher net utility, opted for a utility-maximizing contract. R. H. Tawney (in the foreword to Weber's book [p. 10]) argued that there was a vast difference between the teachings of Calvin and Calvinism as practiced in England and Holland. In particular, emerging entrepreneurs and capitalists resisted interference in business and control of economic enterprise by state and church leaders, a condition that Tawney felt reflected Weber's true meaning of

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rent-seeking societies were characterized by tradition-bound rules and practices that encouraged alliances between church, state, and aristocracy and by a stable, concentrated distribution of wealth. The emerging market order societies were characterized by the entrepreneurial spirit and by increasing opportunities to participate in market activities and to earn profits. The resulting distribution of wealth was fluid, unstable, and increasingly heterogeneous with respect to social class and status. In this setting the Catholic Church's system of price discrimination induced many of the faithful to embrace a substitute religion.

II. A Theory of Protestant Entry

Our economic theory of Protestant entry contains demand-side and supply-side elements. Demand-side elements explain the individual and collective choices to embrace or reject a new religion. Supply-side elements explain how and why an incumbent monopolist such as the Roman Catholic Church could be successful in barring new entry into its religious market.

The Demand Side

Most medieval church historians agree that the sale of indulgences by the Catholic Church played a prominent role in encouraging competitive entry by competing religions. Indeed, the proximate cause of Martin Luther's successful challenge of prevailing authority is almost universally held to be the Catholic Church's record of abuses involving indulgences. In conjunction with this view, we assert that part of the explanation for the rise, and ultimate success, of Protestantism was the attempt by the Catholic Church to extract rents associated with manifold doctrinal innovations, among them the interwoven doctrines of purgatory, penance, and indulgences.

As with any monopoly, the aim of the medieval church was to eliminate competition. It used various methods to accomplish this objective, including political and social pressures against unorthodox "dissenters" (e.g., heretics) as well as rival sects such as Judaism and Islam. It also denounced magic and superstition, which had been practiced from early pre-Christian times. Excommunication, crusades, and inquisitions were various means devised to deal with internal and external threats. But since it was always the prerogative of individuals to "self-select" among formal and informal belief systems, the church had to maintain the quality of its product in order to prevent slippage, and in the face of

the "spirit of capitalism." Protestantism, in short, not only molded the social and economic order but was molded by it.

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potential competition, it was required to price its services in such a way as to attract new customers.[5]

The chief price confronted by individual church members over the first millennium was imposed by an uncomplicated offer of redemption. Despite the fact that temporal punishments and other forms of penance were administered through the confessional, in which some sins or infractions were more serious than others, individual penitents exercised *discrete* choice between eternal salvation and eternal damnation. Before the doctrine of purgatory and its accoutrements, the medieval church did not offer a continuum of choices, certainly none with a halfway house to salvation. The invention and formalization of a package of new doctrines around the eleventh and twelfth centuries, discussed more fully in Section III, fundamentally changed the nature of medieval church doctrine and the customary full-price offer of earlier ages. Taken together, the invention of purgatory, the distinction between venial and mortal sins, auricular confession, and, most important, the granting of indulgences created a continuum of price-behavior choices by which individuals might attain the main religious product: spiritual redemption. In the medieval Catholic Church, redemption was to be attained by living a virtuous life or making expiation for sins. In effect, the choice offered by the medieval church became *continuous*. Paradoxically, the doctrinal inventions referred to above initially lowered the price of sin (making them inconsistent with a public-interest theory of church behavior), but they also created ever-expanding opportunities for rent extraction by raising the costs of redemption to church members.[6]

In its role as gatekeeper of heaven, the medieval church engaged in activities seemingly akin to those that take place in a system of criminal justice. Hence some writers have attempted to rationalize the behavior of medieval church leaders on the basis of the theory of optimal deterrence. We chose a different route for two reasons. In the first place, the theory of deterrence emphasizes the negative (purchase of a "bad")

[5] Early religious orders, such as the Dominicans and Franciscans, were instituted in response to particular heretical beliefs, especially those that focused on the wealth aggrandizement of the church and its leaders in the presence of grinding poverty of the masses. In effect, those orders emphasizing poverty and ministry to the poor met the heretics on their own grounds. When full product price rose through depreciation of quality, the papacy took steps to retain, attract, or regain members. The emergence of the Franciscans and the Dominicans—mendicant orders that preached a life of sacrifice and restraint in response to charges that the church had become worldly and venal—provides an important example. The lowering of relative prices for certain services provided to members of the English Church provides another. The English Church was always more independent than its European counterparts. In order to prevent defection (prior to Henry VIII's definitive break), the church lowered the prices of some services.

[6] Catholic theology held that by his death, Jesus bestowed the *opportunity* of redemption on all. Nevertheless, the actual achievement of redemption required conscious choices by the faithful. Economics holds that every choice implies a cost; hence it is within the realm of economics to discuss the "cost" of redemption or salvation.

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rather than the positive (purchase of a "good"). In the second place, our reading of the historical record does not support the view that optimal deterrence was a major goal of the medieval church. Rather, the instances of price discrimination described by Lunt (1962) suggest that inframarginal rent extraction superseded the goal of optimal deterrence. While these two goals may not be mutually exclusive, it stands to reason that if the church achieved optimal deterrence, it would thereby undermine its revenue base from potential rents.

Historical evidence suggests that the medieval church behaved as a price-discriminating monopoly. As such, it extracted monopoly rents from "customers" who faced a highly inelastic demand for redemption. This could be accomplished by charging different prices for different *customers,* on the basis of their income, a practice the medieval church followed (see table 1 below and the discussion surrounding it); whereas optimal deterrence would have required it to set different prices for different *products,* a practice it did not follow. On this basis, we conclude that the medieval church was primarily a rent extractor rather than an agent of optimal deterrence, and we hypothesize that overzealous price discrimination—fostered by ongoing doctrinal manipulations—led to the Protestant Reformation and the emergence of a rival firm offering a modified product, as well as a less costly pricing scheme. At the same time, certain supply-side considerations allowed the Roman Catholic Church to maintain its power in particular markets.[7]

[7] Deterioration of church services or reduced "quality" may well have accompanied the development of price discriminatory schemes at certain times and in certain places. This factor turns critically on how quality is defined. If "underprovision" of services means that the needs of the poor were neglected, we found little evidence that this was the case. Geremek (1994) distinguishes between "spiritual poverty," as practiced by monks and hermits, and "involuntary poverty." The church always viewed those in the latter category as objects of special charitable treatment (though malingerers and those who would not work were denounced as well by the church and by civil governments). In medieval society, the undeserving poor were cared for both by the church and by the wealthy. Typically a third of the church's total "take" was given to the poor. But to a certain extent, poverty and wealth were *complementary* in medieval society (p. 20). The poor in effect helped "save" the wealthy when the rich succored the poor as an act of repentance. Thus a sizable redistribution was sponsored by church doctrines and regulations, and the wealthy, in turn, supported church and papal interests. The poor therefore provided a *rationale* for the existence of wealth. This, however, does not mean that the church "underprovided" services. Geremek notes (p. 23) that the models for the later provisions of social services were provided by Catholic charities. In the twelfth and thirteenth centuries, e.g., hospitals and hospices were founded and administered by the church in France. Furthermore, while urbanization created an upsurge in poverty in sixteenth-century Europe, a good deal of modern research appears to show that the medieval church actually provided important models for later Protestant innovations in the urban structuring of charitable and social services. Pullan (1971) shows that church activities in fourteenth- and fifteenth-century Renaissance Venice provided such a model. Diminished "quality" provisions, though certainly possible, and perhaps even expected in a monopoly without tradable shares or other forms of market discipline, might have the effect of pushing some individuals beyond their demand curves and possibly encouraging earlier entry into the market. As Smith

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Supply-Side Elements

From the supply side, the medieval church was most likely to maintain its current monopoly against the encroachment of new religions in situations in which it could effectively continue to appropriate consumer surplus by engaging in price discrimination. The conditions necessary for the medieval church to enjoy continual success in its chosen strategy were the following. First, there had to be a large reserve of wealth to tap, which was the case in those societies in which feudal institutions maintained a prosperous landed class or other societal arrangements supported the concentration of wealth. Second, the prevailing wealth distribution had to be relatively stable in order to repay the church's "investment" in information and to keep transaction costs associated with its pricing strategy relatively low.[8] These two conditions were most easily met in tradition-bound, authoritarian societies in which the landed aristocracy typically engaged in rent-seeking rather than profit-seeking activities. In other words, the medieval church was most likely to preserve its incumbent monopoly status in semifeudal societies that had a lot of low-income people (peasants), who were, at best, minor targets of the church's discriminatory policies, and a strong landed class (nobility), which typically cut its own deals with the church and routinely engaged in rent-seeking activity.

By contrast, the medieval church found it difficult to continue its practice of price discrimination in societies that encouraged profit seeking by offering opportunities for increased market participation among less favored economic classes. Where the power of the monarch was relatively weak and the ownership of property was widely dispersed, an ever-growing middle class was able to take advantage of new profit opportunities. The distribution of wealth in such societies was constantly changing, making it more difficult for the church to engage in effective price discrimination. Societies in which political and economic power was decentralized rather than centralized therefore presented impediments to the ongoing profitability of the medieval church.

III. Price Discrimination in the Medieval Religion Market

The first prerequisite for a firm to practice price discrimination is the existence of monopoly power, which the church had acquired by the

(1937, p. 755) noted and Iannaccone affirmed, diminution of quality may take a number of forms, including personal and church aggrandizement, weak attempts to stimulate fervor and devotion in the faithful, or "less liberal" hospitality. Further study will be required to identify such causes of increase in full price during the Middle Ages.

[8] It was costly to establish, maintain, and *change* the price lists that provided the backbone of the church's pricing strategy (see, e.g., table 1 below). Hence, the church would be interested in minimizing these costs as much as possible.

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Middle Ages. The medieval church took on the posture of a vertically integrated, dominant firm, capable of engaging in product innovation, differentiation, and development.[9] From the twelfth century on, it introduced doctrinal innovations that facilitated the practice of price discrimination and expanded the opportunities to price-discriminate. Through these innovations, church managers were able to manipulate both the quality of their product (i.e., the solidarity of its redemptive promise) and the full price of membership in its spiritual body.

Price discrimination also requires separable markets. If arbitrage is possible, discrimination will break down. Separation is, of course, easier to achieve with services than with tangible products. The church issued general rules and regulations respecting the redemption of souls, but local bishops, and especially parish priests, interpreted and applied these rules. The establishment of the requirement of auricular confession (ultimately mandated at least once a year for all church members) provided an efficient means of levying discriminatory tariffs on penitents. The intimate, small-scale nature of medieval towns and villages allowed priests to determine income profiles and other personal information about their parishioners (LeRoy Ladurie 1978).

Finally, price discrimination requires the absence of available substitutes and variations in the elasticity of demand across customers. That different groups of consumers had *different* demand elasticities is self-evident. Throughout much of the Middle Ages, monarchs, aristocrats, and other people of wealth faced intense social pressure to belong to the Catholic Church. The practice of papal investiture, which gave popes veto power over monarchs, meant that a good relation with the church, at least formally, was often a prerequisite to acceptance by the governed.[10] All in all, the wealthy had few religious alternatives, whereas the poor had considerably more and therefore much higher demand elasticity. Their access to popular heresies (such as those found in southern France and Italy) and superstitions, especially those trailing the wake of the Black Death, created a number of substitutes that did not transfer across social strata to wealthier individuals. Equally evident in medieval society was the dearth of practical substitutes. Judaism was not a proselytizing religion, and, except for lingering Muslim influence in Spain, Islam was confined to the periphery of the European continent.

[9] The ferment of the "thirteenth-century renaissance" that was stirred by economic changes and by the encounter with Greek philosophy through the mediation of Islam led to a much more complex religious society than that characterized here. Hence, the assumption of a vertically integrated, dominant firm is an analytical device that is not intended to capture the full texture of European history.

[10] The church and secular authorities were constantly vying for the upper hand throughout the Middle Ages. By 1516, French, Portuguese, and Spanish monarchs had complete control over the naming of Catholic bishops in their domains, so it was not always clear who controlled whom.

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Successive doctrinal innovations quickened and intensified the practice of price discrimination by the medieval church, as indulgences, auricular confession, the dichotomy between mortal and venial sins, and a number of other doctrinal practices provided more opportunities to extract rents from the faithful.[11] The explicit payment schedules for indulgences prove the economic sophistication of the church managers. Product innovations of the church were relatively new when it began to link price discrimination with indulgences to encourage participation in the "holy" crusades in England and elsewhere. Gregory VIII was apparently the first pope to obtain money in this fashion, but his successors learned quickly (Lunt 1939, p. 421).[12]

Papal agents showed considerable sophistication in devising price discriminatory schemes. For example, Jasper Ponce, the papal agent to England during the late fifteenth and early sixteenth centuries, developed a schedule of "gifts" for a plenary indulgence with three categories of givers (i.e., laymen owning substantial real property, laymen owning substantial movable property, and clergy owning substantial real property). Each category contained four to seven differentiated tariffs based on personal income (Lunt 1962, pp. 603–4). Ponce and his deputies were given complete power to absolve *all* sins, mortal and venial, excepting only those committed directly against the papacy itself (pp. 602–4).[13] During the reign of Henry VII, the same principles were incorporated into the establishment of a "jubilee indulgence" in 1501. This last schedule is replicated as table 1.

Such evidence confirms that the medieval church was engaging in

[11] One example involved opportunistic use of the usury doctrine. Since church doctrine treated usury as "theft," confessors customarily withheld forgiveness until restitution was made. Often the amount of restitution was based on the usurer's wealth. In the case of deathbed restitution, the church took the money if the usurer was uncertain (*incerta*) about the identity of the wronged parties, which was a common occurrence (see Nelson 1947).

[12] In 1188, Pope Clement ordered the archbishop of Canterbury to command subsidies from the faithful for which the bishop "was empowered to grant them remission of sins proportioned to the 'quality of the person and the quantity of the subvention'" (Lunt 1939, p. 422). The collection and handling of monies from these partial indulgences became increasingly efficient throughout the twelfth century (beginning with Innocent III). As the Middle Ages wore on, rent seeking through the sale of indulgences (for crusading and a variety of purposes) accelerated throughout Europe. Papal bulls countenanced differential pricing with regard to the granting of indulgences. Lunt (1962, p. 494) describes a three-tiered system whereby the highest price was paid by the wealthy, an intermediate price by middle-class members, and a low price by the poor. In Scotland, a five-tier pricing schedule was imposed for the jubilee year of 1475 (p. 586). New devices for collection and refined schedules were a hallmark of rent seeking in the later period. Pope Alexander VI (1492–1503) routinely directed papal agents to press the faithful for more "donations."

[13] If the goal of the church had been optimal enforcement and deterrence, we would expect to see lower full prices extracted for minor sins than for serious transgressions (e.g., adultery), which was not the case.

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TABLE 1
PAPAL BULL ESTABLISHING JUBILEE INDULGENCES IN ENGLAND, 1501

Property	Rates of Levy
	Fixed Property
Tenements, rents, etc.: all individuals earning above £2,000 per annum	£3 6s. 8d.
Secular:	
£1,000–£2,000	40s.
£400–£1,000	26s. 8d.
£200–£400	13s. 4d.
£100–£200	6s. 8d.
£40–£100	2s. 6d.
£20–£40	16d.
Clergy:	
>£2,000	£10
£1,000–£2,000	10 marks
£500–£1,000	£3 6s. 8d.
£200–£400	40s.
£100–£200	20s.
£40–£100	10s.
Fixed property >£40 plus movable property >£1,000 (secular)	40s.
	Movable Property (Secular)
£400–£1,000	6s. 8d.
£200–£400	2s. 6d.
£20–£200	12d.
0–£20	Level of devotion

SOURCE.—Lunt ([1934] 1965), 2:481–82.

(second-degree) price discrimination.[14] There is, of course, no self-selection here—one's income or the real value of one's property is determined a priori—but the monopolist sets out charges ex ante on finely graded income classes. Note that the wealthiest property owners were charged the highest amounts regardless of whether their property was fixed or movable. Moreover, clergy were not spared the indulgence "tax"; if anything, the tax was stiffer on prelates and monasteries. The rich paid dearly, and only the poorest escaped with payments geared to "their level of devotion" (marginal cost?), indicating a high degree of price discrimination.

While the schedule shown in table 1 was produced specifically for

[14] In a modern context, opportunities for increasing producer wealth through price discrimination are never fully exploited, as Peltzman (1976, p. 236) has shown, because complete exploitation would narrow the consumer base of the monopoly's constituency. This was no less true in the Middle Ages, when the invention of purgatory made it easier for the medieval church to levy huge taxes on wealthy sinners, making Protestant entry easier, ceteris paribus. But entry occurred on a selective basis, as we discuss in Sec. IV of this paper.

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England, papal agents used a variety of taxes throughout Christendom.[15] Vatican archives reveal that around 1512, wealthy banking families, such as the German Fuggars, became papal agents for the collection of indulgence receipts and other forms of taxes (Lunt 1965, 2:485). The kind and severity of taxes multiplied as the Middle Ages wore on. Temporary levies became permanent, and many new taxes were imposed on the wealthiest church members. Church documents assembled by Lunt (2:528) reveal that sons and grandsons of heretics had to pay up for the sins of their fathers, "compounded at least at 25 ducats if poor, otherwise, as much as can be had." Vows and oaths were commuted on payment (except those relating to chastity or religious orders), the souls of deceased relatives could be extricated from purgatory for fees, and those leaving money or gifts for crusades "in their wills would receive an indulgence proportioned to the quality of their persons and the extent of their resources" (Lunt 1939, p. 529).

In addition to the market for indulgences, evidence also abounds of rent seeking in the marriage market. Endogamy and marriage regulations were manipulated in order to produce as high a rent as possible by attaching "redemptive promises" to the marriage contract.[16] Exemptions were paid for by the wealthy, not the poor, who were permitted to plead *in forma pauperum* (Helmholz 1974, p. 161; Ingram 1987, p. 57), yet another manifestation of a high degree of price discrimination. Threats of excommunication for lying about one's income served as enforcement mechanisms. Marriages based on kinship as high as the seventh degree were prohibited, making it easy to find (or manufacture) an illegal tie. Lunt (1965, 2:525) provides evidence from Vatican archives that Maximillian, duke of Austria and Burgundy, paid 2,250 ducats for a matrimonial dispensation, a considerable sum for the time, and there is strong evidence that exemptions for "endogamy" were routinely granted to the aristocracy for high prices or for political favors (Duby 1978, pp. 30–57; Davidson and Ekelund 1997). Differential punishments levied for these and other "victimless crimes," such as usury, suggest again that neither optimal deterrence nor efficient punishment was the immediate goal of church policy, but that rent seeking rather than welfare maximization appears to have driven the church's actions.

Through time, the church continued to direct doctrine and practice to extract as much consumer surplus as possible from the faithful by

[15] Judging from the papal records, fraud was common, and malfeasance was dealt with severely through excommunication. Typically, chests were installed in churches in which the faithful might deposit offerings for the forgiveness of sins. The chest had three keys: one for the bishop, one for the parish priest, and one for a devout layman (see, e.g., Lunt [1934] 1965, 2:483; 1939, p. 423).

[16] Endogamy regulations were church rules regarding marriage within a kinship group, or degree of "blood." In the context of marriage, brothers and sisters were considered first-degree relations, first cousins second-degree relations, and so forth.

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implementing various second- and third-degree forms of discrimination. The church, in short, manipulated both the quality and the full price of its product so as to put members on the margin of defection. By eliminating the priest as "middleman," Protestantism offered an alternative, less costly path to salvation. The new religion held that the believer was saved by faith, interpreted as a gift of God. Therefore, personal salvation did not come from the institutional church but directly from the grace of God. In its initial form, Protestantism had fewer mechanisms through which its agents could extract rents, so that, in effect, it "sold" redemption much cheaper, even allowing for the seemingly random allocation of God's grace. This lower-cost alternative might be especially attractive to the wealthy, who saw the prospect of regaining some, or all, of their consumer surplus taken by the Catholic Church.

Protestantism also repudiated the formalism and much of the complexity of Catholic dogma, characteristics shared by all the reform movements, whether espoused by Luther, Calvin, Zwingli, or others. This reduced emphasis on the institutional church, with its plethora of rules and regulations, and the refocus of Protestant doctrine on "in-kind" expenditures, such as "good works," over monetary payments, constituted a clean break with established religion.[17] This break had its own attendant costs, but such costs may have been perceived as less costly than the Catholic Church's strategy of price discrimination, which over time tended to drive certain believers to the margin of defection.

IV. Protestant Entry: Successes and Failures

Despite the obvious appeal of a simple, direct, and relatively inexpensive path to salvation, Protestantism did not meet with universal success. To understand the ability of the medieval church to maintain its incumbent monopoly status in the face of this new challenge, we look to the supply-side elements of our theory.

[17] The return to a simpler contract for salvation did not formally imply a payment in kind of "good works" as a substitute for indulgences. Rather, the individual who was saved by faith (grace) would demonstrate that saving grace in good works. In practice, most laymen probably thought they were "earning" salvation by good works, not just demonstrating their faith, but this is contrary to Protestant and traditional Christian doctrine. According to Weber (1930, p. 115), good works "are the technical means, not of purchasing salvation, but of getting rid of the fear of damnation. In this sense they are occasionally referred to as directly necessary for salvation …. Thus the Calvinist … himself creates his own salvation, or, as would be more correct, the conviction of it. But this creation cannot, as in Catholicism, consist in a gradual accumulation of good works to one's credit, but rather in a systematic self-control which at every moment stands before the inexorable alternative, chosen or damned." Moreover, Weber writes that "there was no place [in Protestantism] for the very human Catholic cycle of sin, repentance, atonement, release, followed by renewed sin. Nor was there any balance of merit for a life as a whole which could be adjusted by temporal punishments or the Church's means of grace" (p. 117).

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Rent Seeking versus Profit Seeking

Our theory predicts that, ceteris paribus, rent-seeking societies would reject Protestantism, whereas profit-seeking societies would embrace it. How well does this theory hold up to the historical record? Did Catholicism eventually price its product so as to drive away large numbers of customers seeking redemption at a lower cost? Incomplete or unreliable data from an era so far removed in time make these questions difficult to resolve in any conclusive sense, but we have devised a two-stage test in an attempt to find evidential support of our theory. The first test relies on the institutional practice of primogeniture as a proxy for income distribution; the second correlates changes in city size (i.e., urban growth) to the practice of primogeniture in those countries in which such laws existed.

One measure of the economic ossification that enabled the church to maintain its market hegemony is the extent to which restrictive property laws were enforced.[18] Feudal forms of property differ from capitalist forms of property. Some countries practiced primogeniture and some did not. Primogeniture was confined mostly to Europe and was practiced mainly among the upper classes, which were entrenched within a centralized power system.[19] The law should have concentrated wealth in the hands of a few dynastic families, but by disinheriting younger children, it could also cause untold bitterness within the family. For these reasons, practice often diverged from the letter of the law.

In those societies resistant to an emergent market order, children were key to dynastic survival. Too many children, particularly adult males, strained and sometimes destroyed the resources of houses practicing partible inheritance. But too few children created even worse problems. Somewhere in the minds of kings and princes always lurked the fear that they would not have a legitimate male heir. No one knew how many sons were needed for a line to survive. Statistical norms, if they existed, were not reliable. Child mortality rates were high. Royal inbreeding exacerbated the problem. The mortality even of adult firstborns was always in doubt. Yet primogeniture could induce landless sons to remain bachelors, thereby reducing the pool of eligible heirs. Dynastic families considered it a duty not only to have children but also to care for them, which meant not only providing nurture and basic

[18] We do not imply, of course, that larger historical processes were not at work also. Shleifer and Vishny (1998, p. 51) demonstrate that preindustrial absolutist governments are associated with low economic growth.

[19] Goody (1983, p. 118) argues that a self-interested church, as early as the sixth but definitively in the eleventh century, manipulated the marriage market and inheritance probabilities in the church's own favor by limiting kinship claims to land and property (see also Davidson and Ekelund 1997, pp. 228–30), a view that suggests that the church may have supported primogeniture for similar reasons.

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education but also launching them into the adult world with some measure of economic security, namely, mate and property.

In this institutional milieu, the medieval church served the landed aristocracy as a kind of insurer, or employer of last resort: younger sons could become retainers through ecclesiastical sinecure, a station that could be relinquished if the eldest son died. Moreover, female children could also find ready "employment" in the church. As Fichtner (1989, pp. 52–53) observed, "Catholics had a better way to enjoy the advantages of primogeniture, yet live with their consciences over the treatment of younger sons. They could still arrange appropriate livings for their offspring in the church." Prince-bishops, which is what many of the nobility became, were assured that as high church officials they could maintain a lifestyle befitting their dynastic station. Ecclesiastical careers did not bar anyone from secular dynastic affairs, and even if they did, noble ecclesiastics had little trouble returning to secular life. The medieval church, in other words, approved of primogeniture precisely because it promoted the kind of stability of wealth distribution that enabled it to successfully price-discriminate among certain members and because it extended the church's control over kinship, which was an ongoing concern in its constant battle with dynastic families for political and economic control. Simultaneously, the practice of primogeniture provided an incentive to the heads of dynastic families to remain within the system of established religious practice.

A Preliminary Test

As a preliminary test of this proposition, we gathered data on the principal entry points of Protestantism and compared the acceptance of the new religion with the conditions most likely to encourage its success or failure. Our stylized theory predicts that societies enforcing primogeniture would be most likely to remain Catholic, whereas those societies with more fluid property laws (and hence more opportunities for wealth enhancement by a larger strata of society) would find Protestantism more palatable. One possible drawback of this theory is that it treats primogeniture as exogenous, which may not have been the case. At this point, however, we do not have the historical wherewithal to construct a model that makes primogeniture fully endogenous.

Table 2 is replicated from a sociological study undertaken by Swanson (1967). It shows the pattern of primogeniture in various European countries in which Protestantism competed with Catholicism in the sixteenth and seventeenth centuries. The table shows the geopolitical divisions

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TABLE 2
CIVIL GOVERNMENTS, RELIGIOUS CHOICE, AND PRIMOGENITURE

Society	Final Settlement (1)	Regime Established (2)	Primogeniture (3)
		A. Catholic	
Austria	1620	1521	yes
Bavaria	1564	1505	yes
Berg-Jülich	1614	1423	
Florence		1282–1366	yes
France	1685	1460	yes
Ireland		1350	yes
Poland	1607	1490–1573	yes
Portugal		1490	yes
Scottish Highlands		Before 1400	yes
Spain		1492	yes
Venice		1297	yes
Swiss Confederation:			
Fribourg		1469	no
Lucerne		1424	no
Schwyz		1353	
Solothurn	1533	1533	no
Unterwalden		Before 1400	
Uri		1373	
Zug		1415	
		B. Protestant	
Bohemia	1593	1500	
Brandenburg-Prussia	1613	1450–1500	no
Cleves-Mark	1569	1480–90	no
Denmark	1536	1523	no
England	1553	1400–1485	no
Geneva	1536	1530	
Hesse	1605	1500	no
Hungary	1540	1500	no
Saxony	1539	1425	no
Scottish Lowlands	1560	1470–90	yes
Sweden	1536	1523	no
Swiss Confederation:			
Appenzell	1524	1513	no
Basle	1528	1521	no
Bern	1528	1500	no
Glarus	1532	1387–1450	no
Schaffhausen	1530	1411	
Zurich	1525	1444–1519	
Transylvania	1557	1541	
United Provinces	1579	1579	
Würtemberg	1535	1514	no

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common to western Europe at about the time Protestantism emerged.[20] Panel A includes those societies that remained Catholic and panel B those that became Protestant. The date of final settlement (col. 1) is the year given by Swanson as the point at which the issue of religious choice was decided once and for all. Column 2 indicates the establishment date of the political regime in place at the time of final settlement. Column 3 indicates whether or not the regime enforced primogeniture or similar laws of entail.

It is difficult to get accurate data on all the principalities involved, partly because controlling legislation is relevant only to a particular, limited time frame and partly because the autonomy of several principalities gave way over time, and with it their geopolitical identities disappeared. Of the 38 principalities in Swanson's study, we have been able to verify institutional practice on partible inheritance for roughly 70 percent of the regimes. We have been unable to find conclusive data on the rest. Nevertheless, these preliminary findings are interesting from several different perspectives. Among other things, they provide reasonable support for our thesis. They show that, by and large, those societies ruled by primogeniture remained Catholic, whereas those with partible inheritance laws embraced Protestantism.

The principalities that remained Catholic despite the Protestant threat shared certain characteristics. For the most part, principalities that remained Catholic were semifeudal and tradition-bound. Austria, Bavaria, France, Spain, Portugal, Ireland, and the city-states of Italy were rent-seeking societies, intent on preserving existing wealth but hostile to the creation of new wealth because they limited access to land and to emergent market opportunities.[21] The nobility in these societies was essentially parasitic, deriving its patronage from the monarch, who kept its powers in check. Austria and Bavaria were part of the far-flung Hapsburg empire, in which the Ottoman menace generated a strong desire to keep family estates intact. In contrast to England, moreover, the nobility's income in Austria was not supplemented by commercial or

[20] Certain countries existing today were not united prior to 1700. Hence, Florence and Venice appear in table 2 but Italy does not. Likewise, Switzerland was not a unified country. It consisted of Geneva on the one hand and 13 loosely confederated cantons on the other. Certain Germanic principalities appear, but no unified Germany yet existed.

[21] We do not argue that Venice and the other city-states, especially Florence, did not prosper prior to and during the Renaissance. Nevertheless, because these cities, their governments, and their regulations were inextricably intertwined with papal interests, we categorize them as rent seeking in nature. The Italian city-states and their leading families had, for centuries, stood in a close financial position with the church. Over the ages, certain families, most prominently the Medicis but others as well, effectively inherited high offices of the church, including the papacy itself. Economic relations between Rome and the Italian merchants included provisioning for the crusades, banking for the Vatican (Lunt 1962, p. 598), and management of the papal cartel over Italy's alum mines (DeRoover 1948, p. 47).

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industrial ventures (Schenk 1953, p. 105). The gulf between the rich and the poor was perhaps widest in France, where the wealth of the nobility depended on the near-absolute power of the monarch. Spain and Portugal maintained centralized monarchies on the French pattern. Ireland's rigid land tenure system worked to keep fortunes concentrated in few, mostly absentee, hands. A separate nobility existed in each of the Italian city-states, but all nobels derived their wealth from land, which was preserved by the institution of primogeniture.[22]

Panel B of table 2 shows the principalities that embraced Protestantism. In Bohemia the nobility had expelled the clergy from the Diet and appropriated most of the wealth of the church before the advent of Protestantism, so that the church was powerless in the face of the new religion (Eberhard 1992, p. 32).[23] In Prussia and the German territories, as elsewhere in medieval times, the wealth of the nobility was based on land, but ancient custom sanctioned the right of each noble to apportion his private holdings at will among his sons, regardless of their order of birth. In the Middle Ages, weak emperors and fragmented politics characterized German principalities. Germany was, moreover, distinctive for its developed urban life. A dense network of almost 2,000 towns, spread more or less uniformly across the countryside, covered its landmass. These towns enjoyed a high degree of economic and political autonomy and offered freer access to business opportunities than their counterparts in France or Italy (Scribner 1994). Scandinavia had a long-standing constitutional tradition that limited the power of the monarch. Land was valuable there not so much for the crops or livestock it could support but for the minerals that lay below ground. Land was not entailed, and there were few impediments to the transfer of lands held by the nobility. Moreover, it was extremely rare for the Swedish nobility to enter the church. The Swedish aristocracy was mostly a working aristocracy of bureaucrats, soldiers, and sailors, whose livelihood depended on a good job and a fair promotion (Michael Roberts 1953, pp. 38–40).

England's experience with the Reformation was complex and atypical. So was its experience with primogeniture. Despite suggestions to the

[22] It should be noted also that in Italy and France a large number of nobles entered the church, giving the landed interests disproportionate representation among the clergy. J. M. Roberts (1953, p. 71) remarked that "so large was the number of Lombard nobles entering the Church that it was inevitable that the Lombard families should be well represented in the higher ranks of the clergy." And McManners (1953, p. 31) observed that "for younger sons especially, the Church could serve as a system of luxurious outdoor relief."

[23] Bohemia was the center of the Hussites, a sect devoted to the principle of Utraquism, the communion of the laity under the species of wine as well as bread, which in medieval times was reserved only to the Catholic clergy. In terms of heretical belief, it was a conservative movement. Nevertheless, in its desire to subordinate papal and conciliar authority to that of the Bible, it was a significant prelude to the Protestant Reformation and was recognized as such by Luther.

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contrary (Becker [1981, p. 128], citing Sayles [1950]), modern historical research presents strong evidence that the institution of primogeniture was regularly thwarted, from the time laws were first introduced by the Normans in the eleventh century.[24] (Neither Anglo-Saxon nor Germanic practices in England included primogeniture.) In the twelfth century (c. 1164–80), Henry II created a substantive land law with tenant rights reviewed by juries. Monarchical rent seeking, which included income for adjudication and returns from patronage, produced "unforeseen consequences"—the creation of property rights for tenants. Prior to Henry's innovation, the lords were a party to the disputes over property, acting as both judge and jury. Henry separated title from lordly acceptance (Turner 1990, pp. 122–23). Even under feudal practice before Henry's reign, however, means of alienating property by tenants were under way; property transactions were merely disguised in feudal language.

A number of devices were developed throughout the Tudor era to avoid the effects of primogeniture. The English law, which eventually applied only in cases of intestacy and then only for real property (Kenny 1878, p. 57), could be at least partially avoided as early as the twelfth century through inter vivos gifts, "family arrangements," including planned marriages, and, most important, the use of wills.[25] Many legal artifices, such as the extremely complex doctrine of "uses," were developed to get around Norman feudal laws involving primogeniture, eventually culminating in the Statute of Wills (1540), which permitted all feudal tenants of the king or mense lords to devise two-thirds of their

[24] Sayles (1950, pp. 224–27) describes only William the Conqueror's attempt to institute military organization through land contracts and through such institutional devices as primogeniture; he does not describe the actual operation and evolution of the system in England.

[25] Several interesting studies explain how family wealth, minor children, and collaterals were protected through devices to avoid primogeniture in the fourteenth (Holmes 1957) and sixteenth (Simpson 1961) centuries. In fact, the legal history of English proprietors consists of a prolonged, multifaceted struggle between the common-law rules of inheritance, which allowed for female inheritance in the absence of male heirs, and entails, which (in part) opposed these rights. The English entail originated as a provision for younger children, providing a grant of land to a younger child on his or her marriage, provided that the marriage produced heirs. Many historians ignore this fact, and many more disregard its ambiguous character. Because entails specified the sex of those who stood to inherit, they provided a means of favoring one sex over the other. By the statute of *de donis* (1285), entails that had formerly been of limited duration became permanent. Thus entails could be used for two different, even contradictory, purposes. On the one hand, they could be used to distribute land to younger children, a fact that supports our theory that entry occurred in areas in which inheritance was partible. On the other, they could be used to keep land in the hands of male descendants, if not indefinitely, then through several generations. There is no comprehensive statistical evidence as to how entails were actually used, but as Smith (1937, p. 363) noted, "The common law of England … is said to abhor perpetuities, and they are accordingly more restricted there than in any other European monarchy."

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lands by will (Bean 1968). According to Spring (1993, p. 32), "With the Statute of Wills (in 1540) the common law rules of succession, long evaded in practice, were officially on the way to becoming default rules, rules that would apply only upon intestacy."[26] The growth of the use of wills and other devices, from the very beginnings of Norman rule, ensured that all children (including females) were generally included in inheritance and that wealth was being more widely dispersed than would be implied under strict observance of primogeniture.

The traditional view is that Henry VIII broke with the Catholic Church in response to a dynastic problem and, because of this, the English Reformation was more an act of state than in any other part of Europe apart from Scandinavia—the result of one man's obsessive quest for a male heir (MacCulloch 1992, p. 166). While this view and the probability that Henry desired opportunistically to co-opt the wealth of the church is certainly supported by the weight of history, the view that religious entry was encouraged by high information costs imposed by ineffective primogeniture laws and the resulting instability of wealth distribution is complementary.

Despite the peculiarities of the English case, it nevertheless conforms to the general contours of our theory. By 1530, the Church of England was ripe for takeover, and in all likelihood, Henry VIII recognized this fact. Further, there is evidence that Henry's confiscations of church property were made with relish.[27] In the end, the Reformation came to England for the same basic reason that it came to other parts of Europe: the church's ability to maintain its discriminatory pricing system was being steadily eroded by the dispersion of wealth.

Finally, we note the bifurcated cases of Scotland and Switzerland. Goodare (1994, p. 97) attributes the success of the Reformation in the Scottish Lowlands to the ruinous taxation policies of James V, which forced bishops and monasteries to raise cash by alienating land through *feuing,* a device by which existing tenant farmers, or other third parties, could purchase the heritable rights to land, leaving the benefice holder with only the right to collect feudal dues fixed in perpetuity. The heavy

[26] While Smith (1937, p. 362) discusses the ancient form of primogeniture in England as a reasonable policy for the lords' defense, he decried its effects in the Europe of his day. When he noted, as Becker (1981, p. 128, n. 8), that primogeniture "continues to be respected" and is "still likely to endure for many centuries," it is clear that Smith is speaking of continental Europe and not England. By Smith's time, the rules of primogeniture were applicable only in intestacy and governed only a tiny portion of inheritances (Lloyd 1877, p. 2; cf. n. 25 above). Similar sentiments concerning primogeniture were expressed earlier in his *Lectures* (Smith [1896] 1964, pp. 117–24).

[27] Simpson (1961) details the entrepreneurial exploits of one Nicholas Bacon, who became a wealth-seeking entrepreneur (thanks to his grandfather's avoidance of primogeniture laws) before, during, and after Henry's break with the Catholic Church. Further, according to Simpson, "every class in England was involved in the immense exciting scramble for the confiscated property of the church" (p. 36).

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inflation of the sixteenth century left the benefice holders with ever-shrinking long-term revenues. After 1530, nobles and rulers imposed their kinsmen as commendators of the monasteries: secular heads who drew revenues from monastic enterprises without taking monastic vows. The monks were powerless to resist feuing and the creeping secularization that accompanied it. Thus, in contrast to England, there was no dissolution of the monasteries in Scotland. They merely faded away, victims of the feuing movement, which essentially revolutionized land tenure and launched a new class of small, independent proprietors.

In the Swiss Confederacy, a natural division of sorts existed between the rural and the urban cantons. The rural states were Appenzell, Glarus, Schwyz, Unterwalden, Uri, and Zug. The urban states were Basle, Bern, Fribourg, Lucerne, Schaffhausen, Solothurn, and Zurich. Geneva did not become part of the confederation until the nineteenth century, but its actions were affected in the Middle Ages by its Swiss neighbors. The strongest opposition to the Reformation came from Lucerne and the inner rural states, especially Schwyz, Unterwalden, Uri, and Zug. In the sixteenth century, Switzerland was within the orbit of what we now call South Germany, a region in which towns gained extensive rights of self-government, either as "imperial cities," which possessed liberties granted by the monarch, or "free cities," which possessed liberties granted by the bishops or other lords. As centers of trade and manufacturing, communication, and learned culture, cities encouraged confederation, which was recognized by the nobles as a threat to their power. Largely infiltrated by the nobility, the church allied itself with the nobles in seeking to repress confederation (Brady 1985). Hence the cities were more likely to embrace Protestantism than the rural cantons, a pattern that, with one or two exceptions, eventually manifested itself.[28] The predominant historical view, that the Protestant Reformation was basically an "urban phenomenon" (Scribner 1994, pp. 219–20), offers another opportunity to test our theory.

A Secondary Test

In the preliminary test outlined above, we argued that primogeniture is a reasonable proxy for income distribution in a medieval society. Inasmuch as city size and growth reflect exchange volume and exchange

[28] The political distinction between lay and ecclesiastical princes grew weaker in Switzerland during this time because the major sees were becoming dependencies of the great families, giving rise to the complaint that the bishops were the cities' greatest foes. "The forty-six bishops who sat in the Diet were commonly the cousins, uncles, nephews, and brothers of the lay princes in this great age of princely pluralists. No less than four sons of the Elector Palatine Philip (d. 1508), for example, became bishops, a record that their Bavarian cousins, the Margraves of Baden, the Wettins of Saxony, and the Hohenzollerns strove with considerable success to match" (Brady 1985, pp. 45–46).

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volume reflects wider income distribution, a demonstrable link should exist between urban growth and the practice of primogeniture (a proxy for income distribution). We have attempted to test this correlation by using the database assembled by Bairoch, Bateau, and Chèvre (1988) and used recently by Shleifer and Vishny (1998) to show that "absolutist" governments are associated with low economic growth (as measured by urban growth). Our context stresses that without primogeniture, other things equal, competition and capitalist exchange are fostered. If our theory is valid and if the relationships between Protestant entry and primogeniture laws are correct, partible inheritance should also play a role in economic growth and city size.

We correlated the change in city size (urban growth) to primogeniture status in countries listed in table 2 for two dates relevant to the emergence and acceptance of Protestantism, 1500 and 1650.[29] Results for the 28 cities in which primogeniture status can be identified are significant.[30] Ten cities in Catholic countries (Tours, Rome, Bordeaux, Orleans, Verona, Brescia, Seville, Malaga, Ferrara, and Cremona) in which primogeniture was practiced were among the top 28 cities in 1500 but were no longer on the list in 1650; whereas only one city without primogeniture in 1500 (Bruges) dropped off the list in 1650. Four cities (three with primogeniture and one without) retained the same rank order. Seven cities with primogeniture in 1500 declined in size by 1650, a statistic that *includes five of the top 10 largest cities in 1500* (Naples, Milan, Venice, Granada, and Tours); whereas only one city (Cologne) without primogeniture declined in population between 1500 and 1650. Significantly, three of 28 cities (London, Cologne, and Nuremberg) in countries without effective primogeniture laws were on the largest city list in 1500, but 10 (London, Amsterdam, Copenhagen, Antwerp, Brussels, Danzig, Leiden, Hamburg, Cologne, and Nuremberg) made the list in 1650, more than a threefold increase. All these cities were Protestant.[31]

If Protestant entry can be linked to primogeniture status, it presumably can also be related (along with other factors) to emergent markets

[29] In the calculation we note that the Low Countries had no primogeniture, but we eliminate Prague and Ghent, which were independent nations until the Hapsburg empire took them over in the late sixteenth century.

[30] The cities were, in rank order for 1500, Paris, Naples, Milan, Venice, Granada, Lisbon, Tours, Genoa, Florence, Palermo, Rome, Bordeaux, Lyons, Orleans, London, Bologna, Verona, Brescia, Cologne, Seville, Marseille, Malaga, Valencia, Ferrara, Rouen, Cremona, Nuremberg, and Bruges. In 1650, they were Paris, London, Naples, Lisbon, Venice, Milan, Amsterdam, Rome, Madrid, Palermo, Seville, Florence, Vienna, Granada, Marseille, Copenhagen, Genoa, Bologna, Antwerp, Brussels, Lyons, Rouen, Danzig, Leiden, Valencia, Hamburg, Cologne, and Nuremberg.

[31] Four cities with primogeniture rose modestly in the rank order (Lisbon, Palermo, Marseilles, and Rouen), and two cities without primogeniture increased in size; London was one of the latter, rising over the 150 years from seventeenth largest to second largest in 1650 (out of the 30 reported by Bairoch et al. [1988]).

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in urban growth centers that tend to create wealth through expansion of profit opportunities. One important result of this "correlation" is that it is consistent with the dominant historical view that the Protestant reformation was an "urban phenomenon" (Scribner 1994, pp. 219–20). Rapidly growing towns, in short, with disperse and unstable wealth distributions, were ripe for Protestant entry. Those societies with more stable and concentrated income distributions were not, and they tended to remain Catholic.

Despite the axiomatic character of our argument that Protestant entry was facilitated by the *instability* of wealth distribution in countries in which primogeniture either did not exist or was ineffective, we regard its consistency with standard historical interpretations as significant. In his essay confirming the substantial avoidance of primogeniture in England, Brodrick (1881, p. 99) observed that "it is impossible not to connect the rapid growth and singular independence of the English gentry under the Tudors and Stuarts with the limitation of entails and freedom of alienation which characterised this remarkable period." Long before the Reformation, the yeoman class in England prospered and became a "middle class" of farmers and merchants. This process of avoidance accelerated, moreover, as early as the thirteenth century, when nonaristocratic judges began changing feudal inheritance patterns in their own self-interest, thereby creating dispersion of property ownership and an "entrepreneurial spirit" (Turner 1990, p. 133). Holmes (1957, p. 7) verifies that from the fourteenth century right up to the Reformation, the English nobility used "family arrangements" to control property and to avoid strict primogeniture laws when it was in their interests to do so (Simpson 1961, pp. 28–29).

Market forces that encouraged entrepreneurial economic activity in England (which only nominally practiced primogeniture) had similar effects on the European continent, where primogeniture was not the law. As noted previously, towns of the German and Swiss principalities were engaged vigorously in income- and wealth-generating activities. According to Dickens (1966, pp. 12–14), Bohemia was a robust entrepreneurial economy, styled as "the Nevada of Europe at the end of the Middle Ages" because of its mining industry, which attracted a large and transient population of foreigners. By contrast, primogeniture encouraged the concentration of wealth and the stability of its distribution in other domains. Lombardy provides a case in point.[32] At the end of the seventeenth century, the number of noble persons in Lombardy was around 6,500. The source of their wealth was land. The Lombard no-

[32] In the Middle Ages, Italy was merely a geographical and literary term. What we now call Italy consisted then of separate and independent city-states, especially Florence, Naples, and Venice. A separate nobility existed in each of these societies. The most "European" of the regions was Lombardy, which included the city of Milan.

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bility was less than 1 percent of the total population of the province, but it owned nearly half the total landed property. Wealth was preserved by the institutions of primogeniture and fideicommissum (J. M. Roberts 1953, p. 67). Spain provides another. The strength of the Spanish nobles lay in the sheer size of their estates. A contemporary estimate calculated that about a third of the cultivable land in medieval Spain was in the hands of four great houses. The institution that kept a large proportion of the national wealth in the hands of the higher nobility was the *mayorazgo,* a law of entail that kept landed estates from ever being legally transferred. Lawyers' interpretations of the Laws of Toro (1505) consistently favored the growth of entail and guarded its strict nature (Carr 1953, p. 48).

Many other historical examples exist.[33] In short, while we do not argue that primogeniture laws "explain" economic growth, there is a good deal of evidence that their observance helped to concentrate wealth and their avoidance helped to disperse wealth in England and in Europe.

V. Conclusion

This paper advances the view that the Protestant Reformation was an economic phenomenon with roots in intertemporal benefits and costs to church members and disaffected groups. It maintains that the medieval church controlled and manipulated doctrine and rules in order to increase its revenues. One result was that benefits to church members were reduced by a church-directed policy of price discrimination that put believers on the margin of defection. The advent of Protestantism as a belief system meant that consumers seeking redemption could take a more direct, less expensive path to salvation. Protestantism made redemption cheaper, and it increased benefits to believers by reducing transaction costs. In the Middle Ages, the successful entry of Protestant sects required a flatter pricing structure. Therefore, rather than introduce a whole new "belief system," Protestant religions adopted Christ and core Christian teachings (e.g., the Bible) but simplified many of

[33] The experience of Poland showed how political and religious interests cooperated (often by force of necessity) to preserve and maintain wealth. After 1370, Poland was ruled mostly by foreign kings. The nobility emerged under these early kings and princes in two groups. The magnates, who formed the Prince's Council, ultimately developed into the Upper House of the Polish Parliament. From this class came the high officials of church and state, who aided the princes in the administration of the country. Below the magnates on the social and political scale were the *milites,* who originally formed the prince's army and frequently received land in return for military service. The nobility that established itself in this period was a very large body. In the middle of the fifteenth century the king turned to the Polish nobility for money to fight the Teutonic Order, for which he gave, in return, a series of charters that bestowed on the nobles considerable political influence in their local assemblies (Boswell 1953, p. 156).

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the details and eliminated the *temporal* connections of the Catholic Church's belief structure. By the late Middle Ages, church doctrine involving purgatory, indulgence, confession, penance, and all their attendant beliefs had become so complex as to be unbelievable, especially at the high prices the church was charging for redemption.

A number of other interesting areas of research relate to, but are excluded from, this study. More work is required in order to produce a clear picture of the special variants of Protestantism and how they developed. Further research would, in particular, probe the precise nature of the "breakaways" and the impact of the Counter-Reformation on religious markets. The Catholic Church was forced to adjust its policies by new competition, and it would be interesting to see how it adjusted after entry took place (in both doctrine and practice).

We conclude by stressing that, in part, our argument conforms to the conventional wisdom. For centuries, historians and other observers have argued that the "selling of indulgences" produced the Protestant revolt. But the traditional argument revolves around the "ethical" consequences and attendant moral corruption that such venality introduced. By contrast, we emphasize the *economic* consequences of early, medieval, doctrinal innovations. Further, we have added a supply side to the argument, which recognizes that the Catholic Church's viability was inextricably linked to the kind of societal and economic institutions that were extant at the time of the revolt.

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